

Effectiveness of Visual Effects as a Digital Storytelling Tool in Short Films: A Perception Study of Film Viewers

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Abstract

The present era of digital revolution is characterised by the growing impact of technologies like graphics and animation, websites, search engine optimization, engaging social media platforms with innovative content and application of artificial intelligence tools. Amid these, visual effects have emerged as one of the most attractive tools of Digital Storytelling. Presently, short films are also making widespread use of this cutting-edge technology to deliver stories in an engaging manner. The study employs Primary Research Method and conducts survey among the young Indian film viewers and comes to relevant conclusions regarding the effectiveness of the usage of this technology in the perspective of short films.

Keywords: Digital; Engaging; Short films; Storytelling; Visual effects.

Introduction

India has always been known in the global diaspora for being one of the countries which produces highest number of films of different languages and genres and its steady growth by leaps and bounds bears testimony to this fact. Films have been influencing the mindset of the masses for ages and whether it is parallel cinema or the box-office oriented commercial hits or presently the exciting web series on OTT platforms, all have their typical elements and their own fanbase. Several factors have played a significant role in making the films more impactful and popular amongst the viewers thus leaving a deep imprint on their minds.

In the present era, short films have been very successful in grabbing the attention of the audience and creating a stronghold for themselves in the

market, especially after the revolutionary development of internet and various digital streaming platforms. As rightly quoted by the very famous Indian filmmaker Imtiaz Ali, "I think web series and short films are exciting forms that have the potential to bring about a change in storytelling and entertainment". film and mainly one of them is that due to the short time duration of such films, filmmakers focus more on portraying the main story of the film and that too in the most engaging and engaging way that engages the audience on the screen keeps. The story has a very important place in short films as the song and dance sequences take place backstage.

It's a fact that the concept of short films is not new to India. The journey of Indian Cinema started with the exemplary contributions of the legendary Indian film maker, Dada Saheb Phalke and some of the noteworthy short films made by him, which created waves in the history of Indian Cinema. Short films occupy a special place in the realm of Indian cinema as they are mostly based on realistic themes and focus on real-life issues or subjects which are very close to the hearts of people and which doesn't require a full-length feature film to be made on them. The trend of short films is becoming more and more popular in the present times of digitalisation and one can witness some of the outstanding short films made by highly acclaimed film makers.

Role and Effectiveness of Visual Effects in Short Films

VFX Technology has added new dimensions to the art of film making all across the globe and India is no exception. Indian films having rich VFX content has been highly successful in winning the hearts of cine goers and the outcome has been quite evident in terms of more footfalls in theatres resulting in box office hits. Films like Dhoom 3, Bahubali, Tiger Zinda Hain, Fan, Kick, Krrish and many more have been able to enter into the pages of history of very popular Hindi films on account of the usage of high quality VFX technology which has been highly appreciated by the Indian viewers.

In the present times when we find this technology greatly influencing the Indian viewers choice of films and their decisions of film viewing, we find short films also coming under the captivating influence of this technology. The origin of short films dates quite a long time back and it's a fact that animation based Indian films was first brought by Dadasaheb Phalke, the legendary Indian film maker with his first 1912 short film named 'The Growth of a Pea Plant.

In this era people don't have much time to watch a full-length film and as a result they enjoy watching short films which are based on either real-life stories or horror or fantasy stories or at times depict a particular problem/issue of the society. With the growing trend of producing short films, budding film makers, are using advanced VFX Technology to a great extent to catch the attention of the viewers who almost get awestruck by the magical effects of computer-generated images. The employment of VFX in short films enables the artists to create total virtual set up, change the background, add, or remove actors or objects, build sets that are impossible to be built in real time. Some VFX based short films have been greatly successful in creating their own mark in the minds of viewers with their amazing technologies coupled with sound and music which have doubly contributed in making the story look more appealing and interesting to the viewers. Audiences always remember films where VFX techniques have been used very smartly with good storyline. Short films are no exception, rather certain short films are specially remembered for the employment of flawless VFX Effects in them and thus getting noticed amongst the masses on account of it, even though at times the films may not have a strong storyline.

VFX designers by using various techniques like Rotoscoping, Tracking, Color correction, compositing, and explosion with the help of tools like Adobe After Effect, Fusion, Nuke etc. create a long-lasting effect in the minds of viewers. There are many best VFX based short films such as 'A Drop' by Julien Vanhoenacker in which the VFX techniques are stunning. VFX team created a visual poetry through images in the film. This film provides multiple meanings and ideas and forces the audience to make their own choices. The live-action short film has a strong visual narrative, and it allows the viewers to come to a conclusion of their own. 'Time Travelled Future Boyfriend' by Ben Rock won the audience choice Award at the [Pensacon Film Festival](#). In the film 'Agartha' by Sébastien DEKEYSER, the makers used VFX to create the magical world of vegetation and captivating beauty was recreated with the scene of blue- and purple-coloured flowers blooming everywhere in the magical world. Another remarkable film named, 'Blink' by ArtFx School showed how a car accident would really look like if time is being frozen. French artists have beautifully showed the things frozen in time in this film. The artists explored the possibility of frozen action with the help of VFX. The list is endless. Besides the likeability and engagement factor, the VFX based short films also serve a very fruitful purpose from the business point of view as certain scenes which would have been impossible to create or would have involved huge budget can be shot with the help of VFX Technology incur-

ring less expenditure.

Literature Review

Patricia Netzli, in her book 'The Encyclopedia of Movie Special Effects', divides practical effects into three major categories: visual effects, make-up effects, and mechanical effects. Where visual effects or VFX plays a very important role in films, visual effects include in-multiple-camera or post-production manipulation where many VFX techniques used are chroma, rotoscoping, colour-correction, compositing, etc. Makeup effects are the ingredients applied directly to an actor or actress. A mechanical impact is a physical effect that occurs on the set of a live action shoot. Mechanical effects include intricately designed sets, robotics, and lighting schemes (Netzli, 2000). As new special effects techniques are developed, new subcategories are established.

Another major study in the area of computer graphics and animation in film media was done by B. Senthil Kumar, D. Nivedhitha, Col. Manoj Kumar, Ayam Perumal (2016). The study explores the fact that visual effects are a very important part of Indian films. Talking about VFX, be it simple films or 3D animated films, both are different from each other, but their visual effects are similar. So film media not only provides information and entertainment, but they also provide many opportunities directly and indirectly to the unemployed people in India. On the other hand, it is also very beneficial for the people because a lot of people are liking the visual effects based movies so the success of the such films are completely based on youth. The study provides valuable insights in this direction as it reveals that the use of VFX in short films is not only providing employment but also creating an affinity for the film among the people.

Another study which highlighted the growing influence of VFX in present films has been done by Heena Kausar and Govind Pandey (2016) titled, "Digital era and changing face of Bollywood cinema". The study describes the commonality as well as differences Visual Effects and Non-Visual effect-based films. The study further describes how visual effects started to be used in films and at the same time changed the attitude of popular cinema to real, manufactured powerful reality effect. From the results of the study, it is concluded that the history of visual effects seeking the reality effect, the spread of digital effects not only has brought about blurring of the line between live-action and effects-added footage, but it is also breaking down the boundary between effects-added live-action footage and animation.

A study related to the topic of research was done by Ryu, Jae Hyung, in "Reality & Effect: A Cultural History of Visual Effects." Dissertation Project, Georgia State University (2007). From the history of visual effects in search of real effects, the proliferation of digital effects has blurred not only the line between live-action and effects-added footage, but also the boundary between effects-added live-action footage and breaking. and animation. This feature is characteristic of effects-oriented films such as Sky Captain and the World of Tomorrow (Kerry Conran, 2004) and Sin City (Frank Miller, Robert Rodriguez, and Quentin Tarantino, 2005). Still images from comic books, the original sources for both films, were converted into moving images through digital post-production, including live action. Footage was digitally combined, manipulated and animated to enhance theatrical reality and the appeal of films. The boundaries between live-action, Digital effects and animations are becoming unclear. In addition, the reality effect of digital Mixed visuals is so loud that they cannot be recognized to such an extent that we cannot easily recognize them use of visual effects without access to film magazines, special features sections of DVDs, or 224 "Making" Books.

A Study named "Special Effects Aesthetic Presentation and Reflection of Film Digital Technology" has also explored major facts. For many centuries, filmmakers have used visual effects techniques to create fantasy and realistic scenes. To define the advantages and development of VFX based cinema we can understand the difference between VFX based cinema and traditional cinema in the paper. Film makers cannot make useless changes in traditional film whereas VFX based technology, on the other hand digital cinema is evolving in computer technology so many creative workers in digital cinema are working with the help of best technology.

A study titled, "Mapping Animation and Visual Effects in the Indian Media and Entertainment Industry: Opportunities and Threats in the International Journal of Humanities, Arts and Social Studies points to data related to the growth of this industry. Expected Growth Rate (CARG - Compound annual growth rate) was 14.3%, but it increased to 13.7% and reached US\$ 20.5 billion in 2015. In the case of television, the growth rate was 15.1% and the expected growth rate was 33.5% in Indian cinema where VFX is the projected growth will be over 16.7 percent during 2016-2020. And the growth rate is increasing from time to time. It will reach US\$ 1.68 billion in 2020. According to the Government of India report, Indian cinema is increasing day by day as Indian cinema is using best quality of visual effects so they need more creative artists for this industry who are giving their best in many job opportunities. There are fields like Indian Cinema

International from the creativity of VFX. At this stage running and growing economically. Future Indian cinema will be transformed into a digital platform where everything will be digital/VFX based.

Research Gap

Among the various categories of cinema, at present short films are also able to attract the masses due to their various advantages as compared to full-length films. The advent of OTT platforms and the drastic change in movie watching trends have given the makers of short films an equal opportunity to showcase their talent and present the story to the film audience in less time, but still on a larger scale. Appeal to leave a deep impression on the mind of the audience.

The application of VFX technology has also added color to the art of storytelling in short films and has contributed significantly to make them more popular and remembered by the masses. There have been minimal studies to find out how VFX technology has changed the art of making short films and how they have been instrumental in making audiences watch more movies as their first choice.

Significance of the study

Visual effects (VFX) is a relatively new area of systematic academic research. India is a major contributor to the animation and visual graphics industry in the global landscape. This study uncovers the various ways in which the application of VFX has influenced the art of short filmmaking and helped in securing a niche for them in the film industry's market.

The success of any film can be judged by studying the reactions/perceptions of the audience, who analyze them on the basis of various parameters ranging from story, star cast and technique to the review of the film. The best barometer to analyze the impact of VFZ based short films on the mindset of the audience is to conduct a perception audit of the young audience who are mainly the viewers of such films. The study is of great importance in studying young audiences' opinion about the role and effectiveness of using VFX in short films and their perception of how and how technology has affected the short film market, in terms of its popularity and audience preference for them. The findings are important indicators for VFX artists and short film makers to explore the possibilities of strengthening this sector of filmmaking, keeping in mind the young film audience's perception towards them.

Theoretical Framework

Marshall McLuhan's theory gave the concept of "Medium is the Message" which emphasises on the fact that medium accompanied by advances in technology is something which changes the world and brings revolution. The theory states that medium should always be studied more in comparison to message as that influences the content and the impact of content. The thinker points out towards the fact that in the field of media what matters is not the message but how the message is being communicated, i.e the medium being used to communicate it and that plays a significant role in influencing human consciousness and society at large. The author tries to elaborate his point of view by giving the example of television and stating that owning a television is more important than what we watch on it.

The study is modelled on Marshall McLuhan's theory as it tries to find out how VFX Technology in short films can influence the interest level and engagement of viewers finally creating an impact on viewer's satisfaction. The study makes it very clear that viewers are highly attracted by the application of VFX technology in short films and the use of this technology in the films at times influences their satisfaction level to such an extent that sometimes even if the story is not so good or very strong enough but still such films have been able to create an imprint in their minds on account of the use of high-end VFX Technology. We can easily understand this on the basis of many instances like the short film 'A Drop' where a man stands alone on a destroyed building and then jumps to die. When he is falling with a high speed, he sees many strange things like destroyed stones, iron rods, dust storm and finally he enters into the floating water and then all of a sudden, he reaches up on the roof of a building and sees many friends there. VFX Technology takes the viewers into a totally different level of unique experience keeping them fully interested in the film making the entire experience very special and memorable.

Research Design

Following are the objectives of the study:

Objectives

1. To develop an understanding about the use of VFX as a Digital Storytelling Tool in Short Films.

2. To explore the perception of viewers regarding which type of Short Films influence their level of satisfaction to the highest extent.
3. To study the perception of viewers regarding the influence of VFX based Short Films on their level of satisfaction.
4. To study the relation between the genre of VFX based Short Films and viewer's level of satisfaction

Based on the objectives, following hypothesis was formulated:

Hypothesis

1. There is a significant relation between VFX based Short Films and viewer's level of satisfaction

Research Methodology

The study is aimed at developing a deeper understanding about the application of VFX in short films and how they have been influencing their process of film making and what has been their impact on viewer's choice decisions. As a part of the study the researcher employs Secondary as well as Primary Data collection methods to explore the various ways VFX driven Short Films are influencing the mindset of young viewers. Secondary data analysis is done by making a study of the various existing literature related to the topic of study.

The research is aimed at studying the opinion of young viewers about the various dimensions of VFX based Short Films. Regarding the same, to gather data, the study employs Quantitative Research Methodology as a part of its research design. The objective was to seek the perception of a good representative sample respondents and come to conclusion regarding the topic of study. As a part of Quantitative Research method, Survey was conducted amongst the sample respondents by administering a well-structured questionnaire.

Sample Characteristics

The study employed Purposive Sampling Method as it was very necessary to gather data from only those viewers who have the basic knowledge about the meaning of VFX and how this technology is being used by the film makers across the globe in their films to generate tremendous

mass appeal. Secondly, the younger generation are more addicted towards watching films on various digital streaming platforms and likewise short films having higher percentage of VFX content have been able to influence the viewing decisions of the younger generation to a great extent. Ormax Media came up with a very important report titled, "OTT Audience Report, 2019" with a large sample size of 10,000. The report explains some major facts related with the demographic profile of OTT Platform audience. The report states that OTT audience is expectedly young. Nearly 60% of OTT audience is below the age of 30 and 21% are in the age group of 31-40 and 20% in the 41+ age group. The report makes it very clear that contents on OTT Platforms are mostly viewed by young populace of the country. The Literature Review also revealed that VFX based films are more preferred by young viewers who show great inclination towards viewing high-end animation content and gaming in the present times of the upsurge of various popular digital streaming platforms. With the people spending more time on internet and various multimedia content, the demand for VFX based films have increased a lot triggering an increase in the preferences of young viewers towards VFX based Short Films too.

As a part of survey method, sample size of 100 was selected for the study falling in the age group of 18-40 years. Simple Random Sampling method was followed for collecting data from the sample respondents comprising only of young viewers. The data was collected through Google form and was analyzed using Statistical Tools like, Pie-Charts, Diagrams and Graphs.

Findings and Interpretation

The quantitative study revealed some major insights related to the perception of young viewers regarding VFX based Short Films and its various parameters. Following are the findings and interpretations

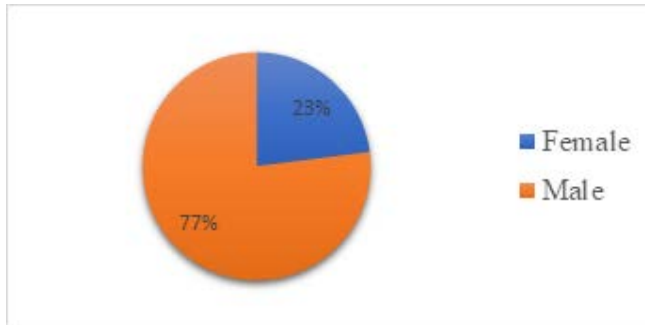
Based on the survey of young film viewers following are the findings and interpretation

1. Demographic Profile of Sample Respondents

Response to, "Gender of respondents"

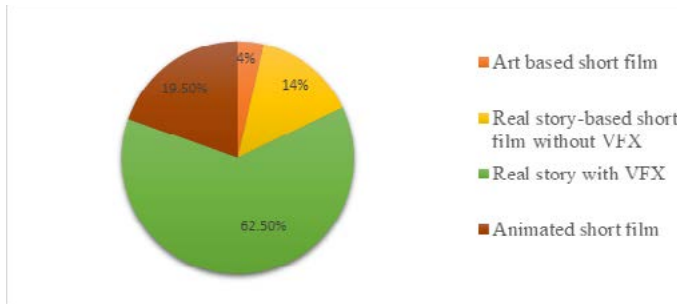
Regarding their demographic profile in terms of gender. Majority of the sample respondents, i.e 77% out of a total universe of 100 are male, signifying that the responses regarding the various items of the questionnaire

majorly reflected the perception of male respondents on the various aspects of the effectiveness of VFX based Short Films on viewer's perception and their choice of films.



2. Type of Short Films and Viewer's satisfaction

Response to the question, "Which type of Indian short film influences your level of satisfaction the most?"



Findings and Interpretation

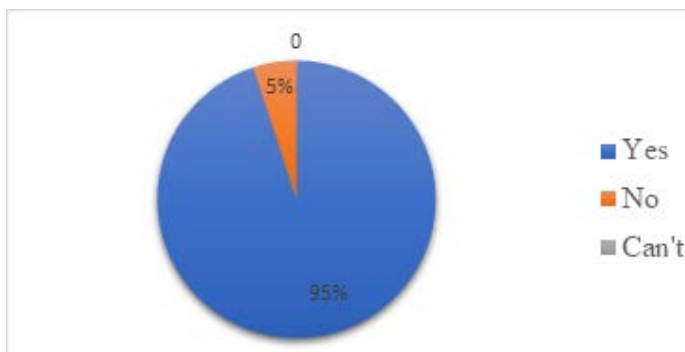
The study was aimed at finding out firstly which type of short films attract the attention of young viewers to the great extent. India being one of the strongest producers of films and with the strong impact of digitization and the noticeable growth of OTT Platforms creating waves, people are offered different format of video content and platforms. Short Films having it's own popularity and market base of viewers who watch them for various purposes ranging from education, awareness and entertainment, the study aimed at finding out that out of different types of short films, which one was the most preferred and liked one.

The results revealed that more than half of the respondents, i.e. 62.5% opined that they expressed highest level of satisfaction while watching real story based short films which are having high VFX Content. The findings can be interpreted as there are many short films which are based on real life stories but the story/content has certain scenes or actions which cannot be shot without employing VFX Technology which makes it possible for film makers to bring to screen such realities and at the same time in a more appealing and liked manner. Second highest number of preferences was for animation based short films which clearly pointed out that in the category of short films young viewers liked usage of high-end technology firstly either in the form of VFX and secondly either in the form of animation.

The findings clearly approved the first hypothesis that there is a significant relation between VFX based Short Films and viewers level of satisfaction.

3. Viewers perception about the use of VFX as a Digital Storytelling Tool in Short Films.

Response to the question, "Do you understand difference between VFX and non-VFX short film?"

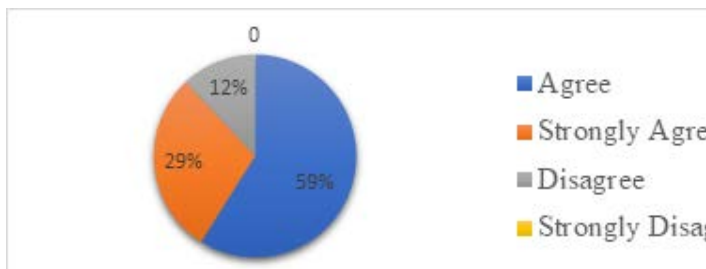


- To develop a better understanding about the various dimensions of the research topic, it was very important to find out whether the sample respondents understood about the basic difference between a VFX and a non-VFX based film, specially short films so that they are able to appreciate the application of the technology in them. The findings were very significant as it revealed some vital facts related to the study. VFX technology has provided new ideas to the film makers to showcase their stories and because of

its great mass appeal it is a very widely used technology in film making in the present times even in short films. The Pie-Chart shows that most of the viewers, almost 95% like short films which are high in VFX content and as a result of purposive sampling, most of the randomly selected sample population expressed that they were aware about the fact of short films employing VFX technology and how they have contributed in creating a popular strong hold for such movies in the market. The results also highlighted that a number of short films are nowadays using VFX and on account of this they have been greatly appreciated by the viewers.

4. Role of VFX in Short Films

Response to the question "Do you agree that the application of VFX technology plays a very important role in Indian Short films?"

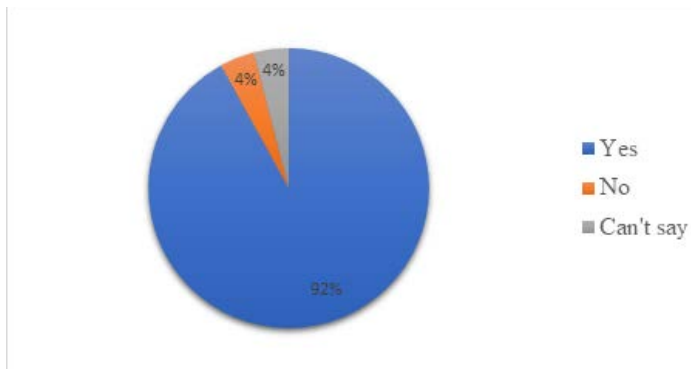


The results of the question were very significant to come to a decisive conclusion from a sizeable good number of respondents who regularly watch films/videos/short films on various digital streaming platforms regarding what is their opinion related to the widespread usage of VFX technology even in short films to make them more engaging, appealing and memorable in the minds of people and making it more convenient for film makers at times to present certain ideas and scenes. More than half of the respondents (59%) agreed that VFX should be used in short films as they play a significant role in making certain scenes more eye catching, specially with the perspective of creating certain characters, action-based scenes, environments or objects which gets deeply imprinted in the minds of the viewers making them fall in love with those scenes and actions finally resulting in making the films more popular. Second highest number of respondents (29%)

strongly agreed that VFX makes the short films, specially taking their short duration into consideration more interesting. There are various good instances of some very successful VFX based short films which kept the young viewers on the edge of their seats on account of the application of high budget VFX techniques employed in the films. The results, almost 90% approximately pointed out towards the fact that the technology should be used more widely in short films taking into consideration at times the stories or ideas which cannot be shot in a normal manner, VFX can make the scenes more thrilling and more visually appealing.

5. VFX Technology as a Digital Storytelling Tool influencing viewers engagement

Response to the question, "Do you agree that VFX technology as a strong Digital Storytelling Tool in short films influences your level of concentration and engagement?"



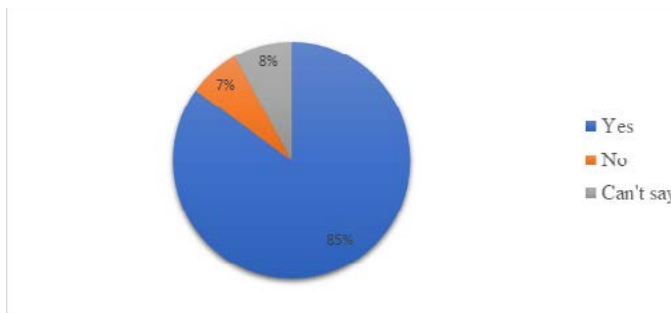
Findings and Interpretation

The findings were very relevant in the present times of the upsurge of Digital Storytelling as the strongest means of conveying ideas or information about products thus leading to the creation of strong brand name or brand recall. Digital Storytelling on account of its unique personal touch of telling a story of the journey of a brand's growth has always appealed to the masses. VFX technology by using computer generated imagery and software has its distinct style of storytelling which raises the eyeballs of viewers and makes them 100% engaged in the story. The results were very significant in further exploring the possibilities of using VFX Technology in short films keeping in perspective people's growing inclination

towards watching short films. The study revealed that in comparison to non-VFX Short films, young viewers greatly prefer VFX based short films and they considered it to be one of the most engaging film making technique in short films. Almost the entire sample population (92%) expressed strongly that they considered VFX as a very engaging digital storytelling tool in short films. The statistics point out a very important trend of film viewing prevalent among the youngsters, specifically in the present period where each new day we find the entry of a new engaging tool of digital storytelling.

6. Satisfaction of young viewers regarding VFX based short films

Response to the question, “Are you satisfied by watching VFX based short films?”



Findings and Interpretation

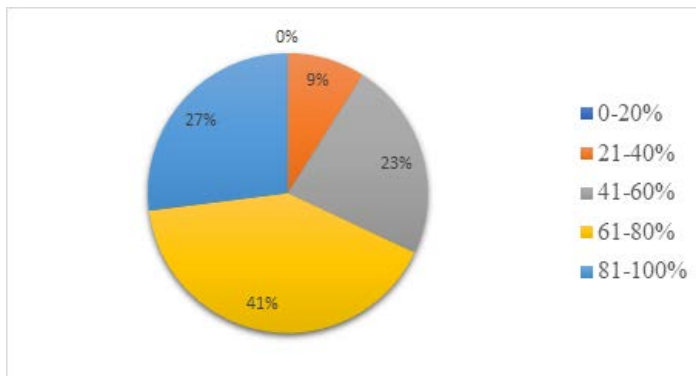
The results clearly point out towards the field-based realities concerning the effectiveness of VFX based short films and their impact on the minds of young viewers. Films being one of the strongest audio-visual platforms of education, awareness and entertainment are made on different themes, storylines and concepts. Various elements of film leave an imprint on the minds of viewers varying from storyline to star cast to music to technology to quality of direction. Every film maker tries to impress the viewers in his/her own way and that is considered as the success of a film. There are nowadays plethora of films, national and international which have used high budget VFX Technologies in them. Short films are bound by time factor and as a result the story needs to be delivered in the most effective manner in the short time span. Taking into consideration certain unique ideas or concepts which are otherwise very difficult to shoot can be easily showcased by employing VFX Technology in films and the same applies to short films too. The responses of the respondents reflected that 85% of

them loved watching short films which are having excellent VFX shots and one of the major reasons behind their satisfaction from a short film is the film having high percentage of Computer-Generated Images.

The results thus prove the hypothesis as almost the entire sample population strongly affirmed that VFX based Short Films satisfies them the most.

7. Percentage of satisfaction towards VFX based Short Films

Response to the question, "What is the percentage of satisfaction when you watch VFX based short films?"

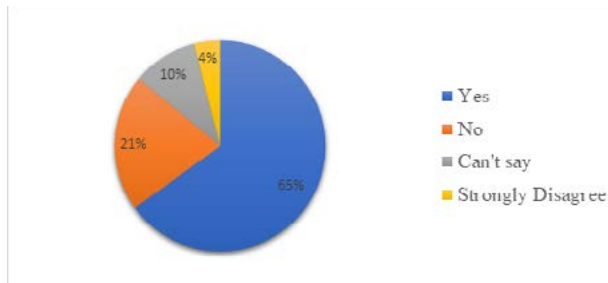


Findings and Interpretation

The study besides finding out the responses of the sample populace regarding their satisfaction while watching VFX based short films also tried to find out the percentage of viewers satisfaction from watching such films. Maximum number respondents, i.e 41.1% expressed that their level of satisfaction while watching VFX based short films fall in the range of 61-80% which is more than 50%. The second highest number, i.e. 26.8% of respondents revealed that their satisfaction from such films were in the percentage range of 81-100%. The results are very significant indicators pointing out prominently towards a major trend of watching short films amongst the young viewers and that is that as short films occupy it's own significant position in terms of the rationale behind making such films, film makers should work more in the area of employing VFX technology in their short films as they are very much liked by the young masses and they are fully satisfied by watching such films.

8. Impact of VFX based Short Films irrespective of story

Response to the question, "Do you agree that VFX based short films create an impact on you even if the story is not powerful?"

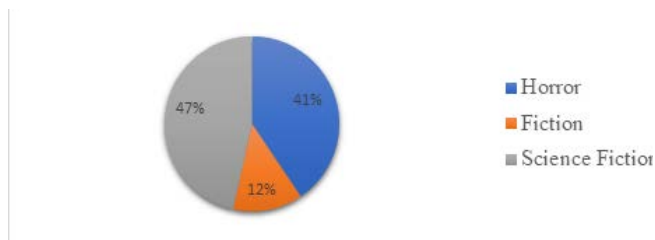


Findings and Interpretation

The findings provided significant data for the researcher which can be greatly helpful for the film makers. Films are appreciated for various factors like storyline, script, star cast, music, technical quality and direction. The findings clearly state the amount of significance viewers accord to VFX Technology in the present times. The results revealed that almost 65% of the respondents opined that they were of the opinion that at times even if the story of the short films is not so powerful and impressive but if the film has been made in a very interesting manner by using high quality VFX Technology then it is successful to a great extent in attracting the attention of the young viewers making it their preferred choice. The responses indicate that viewers are greatly attracted by the kind of highly advanced VFX Technologies being used in presently short films.

9. Genre of Short Film which influences viewers satisfaction to the highest extent

Response to the question, "Which among these genres of VFX based short films satisfies you the most?"



Findings and Interpretation

The research besides aiming at studying the young viewers perception regarding the likeability and popularity of VFX as a Digital Storytelling Tool in Short Films also had a major objective of finding out whether the genre of VFX based Short Films has an influence on their level of satisfaction. The findings were very significant as they explored the viewers level of satisfaction as per the different genres of short films. Almost half of the respondents (47%) expressed that they were influenced by Science Fiction based VFX Short Films to the highest extent followed by horror films securing almost 41% preferences and lastly followed by fiction securing 12%. It's a common thinking that viewers are mostly influenced by science fiction-based films, but the research indicated that VFX based horror short films also influence young viewers and they take deep interest in watching them and VFX techniques make the film stand out both in terms of making the scenes more thrilling to watch with the viewers glued to their screen.

Conclusion

It's a known fact that the entry of VFX in the technique of film making has added new dimensions to the manner of depiction of stories as well as the popularity of films amongst the masses. As rightly mentioned by Business wire, Jan 31ST , 2020, "Animation, VFX and games content is being consumed not only on Netflix, Amazon, Hulu, and Twitch, but also on YouTube, Twitter, and Facebook". The source further explains that in the present era where movie goers are expecting more high-quality productions and engaging visual content, the film industry has also undergone a sea change where we find animation and VFX artists leaving no stone unturned in the direction of creating highly appealing visual effects-based shots which keeps the viewers completely engaged in the film.

The study as a further extension to this, tried to explore the various aspects related to the employment of this technology in the area of short films and tried to find out the perception of young viewers regarding their preferences and likings for VFX based short films. The findings of the study amply demonstrates the equal growing popularity of VFX based short films amongst the young viewers. With the growing internet penetration and the inclination of the masses towards digital streaming platforms, the market shows a great potential for short films too. The short films have been liked by viewers for various reasons and visual effects technology has been one of the game changing elements towards its grow-

ing popularity among the young viewers. The research revealed that the viewers in comparison to non-VFX based short films showed far more inclination towards watching VFX based short films. A significant finding of the study which points out the satisfaction of the viewers while watching a VFX based short films is that the sample respondents expressed the fact that even at times when some of these films lack powerful stories, still they are liked by the viewers on account of the application of high VFX content and as per the finding most of the respondents experience highest satisfaction while watching Science Fiction and Horror based short films.

The study pointed out towards major indicators regarding the application of VFX Technology in short films. The survey results highlighted that young film viewers between the age group of 18-40 years are spending more time towards watching VFX based short films and they experience great satisfaction in watching them and this has catapulted into an exponential growth in the number of such audiences and has made the future of animation industry more and more bright.

Works Cited

Balla, G. *The Director's Method in Contemporary Visual Effects Film: The Influence of Digital Effects on Film Directing*. University of York 2016.

[Businesswire](https://www.businesswire.com/news/home/20200131005198/en/Global-Animation-VFX-Industry-Report-2020-2025-Demand-for-Animation-VFX-Content-to-Power-Immersive-Experiences-such-as-AR-VR-is-Growing-Exponentially). Global Animation & VFX Industry Report 2020-2025: Demand for Animation & VFX Content to Power Immersive Experiences such as AR & VR is Growing Exponentially - ResearchAndMarkets.com [2020](https://www.businesswire.com/news/home/20200131005198/en/Global-Animation-VFX-Industry-Report-2020-2025-Demand-for-Animation-VFX-Content-to-Power-Immersive-Experiences-such-as-AR-VR-is-Growing-Exponentially---ResearchAndMarkets.com). www.businesswire.com/news/home/20200131005198/en/Global-Animation-VFX-Industry-Report-2020-2025-Demand-for-Animation-VFX-Content-to-Power-Immersive-Experiences-such-as-AR-VR-is-Growing-Exponentially---ResearchAndMarkets.com

Ciccione, V. *The Effectiveness of Special Effects: Practical Effects VS Digital Effects* 2016.

Frameboxinda, Importance of Visual Effects. 2016: frameboxxpune.wordpress.com/2016/05/24/importance-of-visual-effects/

Indiantelevision.com Team. Ormax Media. India has seen a healthy growth of OTT audience in the last few years. Yet, brands and OTT service providers know very little about the demographics of their fast-increasing audience. www.indiantelevision.com/iworld/over-the-top-services/indian-ott-audience-young-ur-

ban-and-male-dominated-191116

Kausar, H., and Pandey, G. Digital era and Changing face of Bollywood Cinema, Vol. 5(5), pp. 16-21, E-ISSN 2319-3565(2016).

Kumar, B. S., Perumal, A., Kumar, M., and Nivedhitha, D. A Comparative Study on Genre, Format and Changing Trends, International Journal of Computer Sciences and Engineering. 2018, Vol.-6, Issue-1. pp. 976-78.

Kumar, D., Vats, A. Mapping Animation and Visual Effects in Indian Media and Entertainment Industry: Opportunities and Threats. International Journal of Humanities, Art and Social Studies, Vol. 1, no.2. pp. 19-29.

Maio, A. What is VFX: Defining the Term and Creating Impossible Worlds 2021.

Netzley, P. D.. *Encyclopedia of Movie Special Effects*. Phoenix, AZ: Oryx Press (2000). ISBN: 1-57356-67-3

Patrick, R. Conceptual Framework: A Step-by-Step Guide on How to Make One [Blog Post]. In *Research-based Articles* 2015.

Ryu, J. H. "Reality & Effect: A Cultural History of Visual Effects." Communication Dissertations, Department of Communication. Georgia State University 2007.